



## PATENT ABSTRACTS OF JAPAN

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SCIENCE & TECHNOLOGY  
HOKURIKU**(72) Inventor: **TAMIYA EIICHI**(54) **BIOSENSOR FOR MEASURING INFLUENCE ON  
METABOLIC ACTIVITY OF CELL**change of the light electromotive force before and after  
adding the substance to be examined.

(57) Abstract:

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PROBLEM TO BE SOLVED: To provide an apparatus for  
measuring metabolic activity of a cell.

SOLUTION: This biosensor is used for measuring influence of a substance to be examined on metabolic activity of a cell and the biosensor is equipped with a semiconductor layer 2, an insulating layer 3 laminated on a main face of the semiconductor 2, a live cell or a live cell group 4 which comes into contact with the insulating layer 3 and is arranged thereon, MIS structure comprising a culture solution layer 8 which immerses the live cell or the live cell group 4 and comes into contact with the insulating layer 3, a bias electrode means for applying bias voltage to the MIS structure, a light source means for irradiating controlled light to the MIS structure in order to generate light electromotive force in the MIS structure, a means for adding the substance to be examined to the culture solution layer 8 and a means for monitoring the change of light generated in the MIS structure, and the biosensor measures influence of the substance to be examined on metabolic activity of the cell from the

